ICS2O - Hardware Unit - Key Concepts & Questions

1. Overview
   a) 6 components of modern computer.

2. Microprocessor & CPU
   a) What is the difference between them?
   b) What is their role in the computer?

3. Storage
   a) Compare & contrast HDD, System RAM, Cache RAM.
   b) Explain start up of computer in terms of storage.

4. Peripherals
   a) What are different types of peripherals, and give examples of each.

5. Graphics
   a) How does adding a separate graphics card improve performance (both for graphics and overall)?

6. Binary Number System
   a) Convert between simple decimal and binary numbers.

7. Power & Heat
   a) How is heat managed in the computer. Be specific.

8. Operating Systems
   a) Explain the start up of a computer in terms of software (where is the software, what does it do).
   b) What is BIOS, and explain its function.

9. Performance
   a) What are the main hardware components which affect system performance?
   b) What are some simple ways (i.e., does not require overly technical work) to try to improve performance on an existing computer?

10. Computer Networks
   a) What are the two types of networks, and describe each (including an example for each).

11. Networking Details
   a) How do the following concepts relate to each other on a computer network: MAC Address, IP Address, DNS, DHCP?

12. Home Networks
   a) What are the typical components of a home network, and what is their role?
   b) Compare and contrast wired and wireless networks.

13. Security Solutions
   a) What are some steps you can take to protect your computer from security threats? Give a brief description to explain each.